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AUTHOR Ayabe, Carol
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ABSTRACT

This report profiles the mathematics enrollment patterns of 692 junior and senior high school students in the Mesa Schools from fall 1980-81 through fall 1981-82. The motivating purpose of the study was to determine whether high-scoring Hispanic students avoid taking more advanced mathematics courses, but it included Black, Indian, Asian, and White students. The top three stanine scores of the California Achievement Test were used to define the total population of 4,401 White and 347 non-White students. All non-White students were included in the study, along with a modified random sample of White students. For all races, a reasonably high percentage of these students enrolled in college preparation mathematics throughout high school. In particular, 60% of the Hispanic students compared with 53% of the White students with high scores in grades 10-12 enrolled in college preparation mathematics courses. However, a downward trend was exhibited after grade 9 in the percentage of students enrolled in such courses. The Asian students surpassed other races in mathematics participation at every grade level. Females enrolled in as many or more mathematics courses as males within each race. The appendix includes tables giving the frequency distributions by race, stanine level, and type of course. (MNS)

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DEPARTMENT OF RESEARCH & EVALUATION

MESA PUBLIC SCHOOLS

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A CROSS-SECTIONAL/LONGITUDINAL STUDY OF THE MATH ENROLLMENT PATTERNS OF STUDENTS IN DIFFERENT RACIAL GROUPS WITH HIGH STANDARDIZED MATH SCORES

Carol Ayabe

Dr. George N. Smith
SUPERINTENDENT

Dr. James K. Zaharis
DEPUTY SUPERINTENDENT
EDUCATIONAL SERVICES

Dr. James S. DeGracie
DIRECTOR
DEPARTMENT OF RESEARCH AND EVALUATION

October 1982
MESA PUBLIC SCHOOLS

FOREWORD

The major function of the Mesa Public Schools Department of Research and Evaluation is to provide information to decision makers. This data should be timely, valid, reliable, accurate, and informative. It should be of sufficient depth, yet concise enough to speak squarely to the issue at hand.

In line with the above function, this report by the Department of Research and Evaluation profiles the math participation of students with high standardized math scores within each racial group in the district. Presented are the results of a cross-sectional/longitudinal study of the math enrollment patterns of 692 junior and senior high students from the 1980-81 fall semester through the 1981-82 fall semester.

The major effort in the development of this report was the responsibility of Research and Evaluation, under the direction of Dr. James DeGracie and Ms. Judy Rule. Ms. Carol Ayabe served as project director for this report and is responsible for the contents and design. Mr. Joe Kush served as a data collection aide and without his diligent efforts this report would not be nearly as complete as it is. Finally, the typing and editing of this report is credited to Ms. Donna Replogle.

Research and Evaluation is a department answering to the Associate Superintendent, Dr. James Zaharis.

A Cross-Sectional/Longitudinal
Study of the Math Enrollment
Patterns of Students in Different
Racial Groups with
High Standardized Math Scores

executive summary

Introduction

In reaction to the findings of previous research studies on Hispanic student participation in mathematics, a cross-sectional/longitudinal study was conducted by the Mesa Public Schools Research and Evaluation Department during the 1981-82 school year. The motivating purpose of the study was to determine whether Hispanic students in the district, with high standardized test scores in mathematics, avoid taking more advanced mathematics courses in high school. The study was not limited in scope to only Hispanic students, but included junior and senior high students of all racial groups. Three semesters (1980-81 fall and spring semesters, 1981-82 fall semester) of data were used to study the posed problem.

Subjects

The top three stanine scores (7, 8, and 9) in Total Math on the 1980-81 administration of the California Achievement Test were used to define the particular population of seventh through twelfth grade students with high standardized scores in mathematics. A total of 4,748 students were identified, 4,401 of whom were White and 347 non-White. The identified population of students represented, respectively, 36.4%, 15.6%, 17.4%, 11.9%, and 59.8% of the total White, Black, Hispanic, American Indian/Alaskan Native, and Asian/Pacific

Islander junior and senior high student population in the district with math stanine scores. All of the non-White students were included in the study along with a modified random sample of the White students matched with the non-White students on sex and grade level. The selected population of students totaled 692.

Results

No evidence was found within the district which supported the findings of the previous research. For all races, a reasonable to high percentage (low of 40.0%, high of 100.0%) of students with high standardized mathematics scores enrolled in college preparation mathematics courses throughout high school. The mathematics enrollment patterns of the non-White students were not only, in general, similar to the White students, but equally important, no significant difference was observed between the distributions of stanine scores for any of the races. In particular, 60.0% of the Hispanic students compared to 53.3% of the White students with high standardized mathematics scores in grades 10-12 enrolled in college preparation mathematics courses. No significant differences were observed between the math enrollment patterns of the White and the Hispanic students within each grade level and over all grade levels.

Other results of the study did, however, indicate some potential problem areas. A downward trend was exhibited after the ninth grade in the percent of students enrolled in college preparation mathematics courses. The lowest percentages occurred in the twelfth grade for the White, Hispanic, and Asian/

Pacific Islander students where 48.1%, 41.7%, and 66.7% were enrolled in advanced mathematics courses. The percent of students who progressed positively in math enrollment similarly revealed a decreasing trend after the ninth grade for all of the races. The lowest percent with positive progressions occurred in the twelfth grade for the White, Hispanic, American Indian/Alaskan Native, and Asian/Pacific Islander students. Of these students, 48.1%, 41.7%, 75.0% and 66.7%, respectively, progressed positively from the previous year. The downward trends may be reflections of student decisions to pursue nontechnical fields; student lack of interest in or discouragement with more advanced mathematics courses; lack of more varied mathematics courses such as statistics, probability, nonEuclidean geometry, logic, etc.; or any combination of these reasons.

The Asian/Pacific Islander students were found to surpass the other races in math participation in every grade level and over all grade levels. A significantly higher percentage (80.8%) enrolled in college preparation mathematics courses, a substantially lower percentage (4.1%) were not enrolled in a mathematics course, and a notably high percentage (93.4%) progressed positively in math enrollment. Even among the 7th and 8th stanine students, the Asian/Pacific Islanders revealed higher percentages enrolled in college preparation courses and lower percentages not enrolled in a mathematics course. These results indicate an underparticipation of the other races in comparison to the Asian/Pacific Islanders within even the same stanine groups.

Of the students in the selected population, 9.4% or 65 were enrolled in a second mathematics course during the 1981-82 fall semester. Enrollment in a second mathematics course was more prevalent among the Black, American Indian/Alaskan Native, and Asian/Pacific Islander students (12.9%, 17.1%, and 15.1%, respectively) than among the White and Hispanic students (8.7% and 6.4%, respectively). The Asian/Pacific Islander and Black students were also more likely to be enrolled in a second mathematics course at the college preparation level than the other races. Sixty-one percent of the students who enrolled in a second mathematics course at the college preparation level were enrolled in a computer programming course. Many of the students who were enrolled in a noncollege preparation course took a core mathematics course in addition to a college preparation course. From these results, it can be inferred that a substantial number (9.4%) of students with high standardized scores in math are interested and/or concerned about their mathematics training enough to enroll in two courses within a given semester; that the Black, American Indian/Alaskan Native, and Asian/Pacific Islander students are more interested and/or concerned than the White and Hispanic students; that there is student interest in more varied mathematics courses as shown by the popularity of computer programming; and that there may be unnecessary and wasteful overlapping of subject matter for students who simultaneously enroll in a core course and a more advanced course.

On the more positive side of results, a comparison within races between the level of mathematics courses taken by high

math stanine male and female students revealed very similar distributions of categorized courses within every race except for the Blacks and the American Indian/Alaskan Natives. For these two races, a higher percentage of female students were enrolled in college preparation mathematics courses than male students. This indicates that in the Mesa Public Schools, female students with high standardized math scores are enrolling in as much or more mathematics courses as their male counterparts within each race. The level of mathematics courses taken are also similar between male and female students within each race.

Recommendations

The acquisition of basic mathematical and related skills such as adding, subtracting, multiplying, dividing, counting money change, banking, taxes, etc., cannot be more strongly emphasized and is well-recognized as a prerequisite to functioning competently in today's world. It is a not well-recognized and/or stressed fact that in order to function competently in the near future, people will need substantially more sophisticated mathematical skills than are currently required. Persons with technical expertise already have a definite advantage in conceivably every field of work or study. Employment opportunities are greater for those with technical capabilities and will become even more so in keeping with the rapid acceleration of technological developments. It is recommended that school administrators (principals, counselors, etc.) and teachers encourage all students and particularly

those with high math ability, to take as many mathematics courses as they can throughout junior high school, high school, and college. The fairly high incidence of students taking a second mathematics course and the popularity of computer programming courses suggest that the mathematics curriculum should be expanded to include more varied courses such as statistics and probability which have frequent applications in daily life. An investigation should also be pursued regarding the lessening of math participation in the higher grade levels.

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INTRODUCTION

Dr. Linda Gemmil of the Arizona State University Mathematics Department recently found that the majority of Hispanic students attending Arizona State University have majors in the nontechnical fields of social work and education. The research literature also shows that Hispanic students with high standardized test scores in mathematics avoid taking more advanced mathematics courses in high school and tend to take only the required one year of mathematics.[1] During the 1981-82 academic year, the Research and Evaluation Department conducted a cross-sectional/longitudinal study in order to determine whether or not this latter phenomenon was occurring in the Mesa Public Schools. The study was not limited in scope to only Hispanic students, but encompassed junior and senior high students of all races with high standardized scores in mathematics. Presented in this report are the results of the study.

METHODOLOGY

The top three stanine scores (7, 8, and 9) in Total Math on the 1980-81 administration of the California Achievement Test were used to define the particular population of seventh through

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[1] "Factors Influencing Mathematics Participation of Highly Able Mexican-American Adolescents," research project sponsored by the National Center for Education.

twelfth grade students with high standardized scores in mathematics. A total of 4,748 students were identified, 4,401 of whom were White and 347 non-White. The identified population of students represented, respectively, 36.4%, 15.6%, 17.4%, 11.9%, and 59.8% of the total White, Black, Hispanic, American Indian/Alaskan Native, and Asian/Pacific Islander junior and senior high student population in the district with math stanine scores. Displayed in Table 1 in the Appendix are the representative frequencies for each racial group. All of the non-White students were included in the study along with a modified random sample of the White students matched with the non-White students on sex and grade level.[2] The selected population of students totaled 692.

Class schedules for three semesters (1980-81 spring and fall semesters, 1981-82 fall semester) were retrieved from the district's student data base for the selected population of students.[3] Mathematics courses taken by the students during the 1981-82 fall semester were identified and categorized as college preparation or noncollege preparation. The following courses were designated as college preparation for the respective grade levels:

Grade Level	College Preparation
7-8	Pre-Algebra, Algebra I, Algebra II, Geometry, Accelerated Math, Computer Science
9	Algebra I, Algebra II, Geometry, Computer Science
10-12	Geometry, Accelerated Geometry, Algebra 2, Algebra 2/Trigonometry, Trigonometry/College Mathematics, Calculus/Analytic Geometry, Computer Programming

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[2] A conservative precision of +5%, 95% of the time, was achieved with this sample of 345 White students.

[3] 1980-81 fall and spring semester courses included only those which were completed by the students. 1981-82 fall semester courses were identified from class schedules midway through the semester.

Mathematics enrollments during the 1980-81 fall and spring semesters were also identified, then compared with one another and with the enrollment during the 1981-82 fall semester. Comparisons were made on the basis of student positive or negative progression in mathematics. A positive progression signified that a student enrolled in a more advanced course in the succeeding semester, took a comparable course in the succeeding semester, or enrolled in a course in the succeeding semester whereas in the previous semester was not enrolled in any mathematics course. A negative progression indicated that a student enrolled in a less advanced course in the succeeding semester, did not enroll in a course in the succeeding semester whereas in the previous semester was enrolled in a mathematics course, or was not enrolled in a mathematics course for both semesters.

The 1981-82 fall semester data were analyzed cross-sectionally by race, grade level, sex, stanine, and enrollment in a second mathematics course. Chi-square statistics were applied to the categories of college preparation, noncollege preparation, and no mathematics courses. Longitudinal comparisons were made between the 1980-81 and 1981-82 fall semester data and between the 1980-81 fall and spring semester data by applying chi-square statistics to the categories of negative and positive enrollment progressions.

RESULTS

Frequency counts of the mathematics courses taken by the students during the 1981-82 fall semester are tabulated by grade level and race in Tables 2 through 7 in the Appendix. Presented in Tables 8 through 12 are the frequency counts by race and grade level after the categorization of courses as college preparation, noncollege preparation, and no mathematics course. As can be seen from the tables, a reasonable to high percentage of students of all races enrolled in college preparation mathematics courses from the eighth through the twelfth grades. A downward trend was exhibited after the ninth grade by the White, Hispanic, and Asian/Pacific Islander students. Excepting the seventh grade, the lowest percentages occurred for these students in the twelfth grade where 48.1%, 41.7%, and 66.7%, respectively, were enrolled in college preparation courses. Correspondingly, the percentage who did not enroll in a mathematics course increased after the ninth grade for the White and Hispanic students, reaching a high point of 48.1% and 58.3%, respectively, in the twelfth grade. Nonenrollment was not exhibited by the Asian/Pacific Islander students until the twelfth grade where 33.3% were not enrolled in a mathematics course. The Black students and the American Indian/Alaskan Native students revealed almost diametrically opposing patterns of college preparation enrollment and no enrollment. For these races, however, the number of students within each grade level

was too small to be able to make justifiable conclusions from.

The preceding discussion is more clearly depicted in Figures 1 and 2. Figure 1 portrays the percent of students who enrolled in college preparation mathematics courses, for each race and grade level, during the 1981-82 fall semester. The percent of students who did not enroll in a mathematics course is illustrated in Figure 2. A strong resemblance can be seen between the mathematics enrollment patterns of the Hispanic and White students. The Asian/Pacific Islander students tended to have a substantially higher percentage enrolled in college preparation mathematics courses and a substantially lower percentage not enrolled in a mathematics course in comparison to the other races.

Chi-square statistics revealed no statistically significant differences between the distributions of categorized mathematics courses of the White and Hispanic students within each grade level and over all grade levels. Statistically significant differences were achieved between the distributions of Asian/Pacific Islanders and all other races, and between the Black students and the White and Hispanic students, over all grade levels. Comparisons involving the Black, American Indian/Alaskan Native, and Asian/Pacific Islander students were not made within grade levels due to the lack of adequate numbers of students.[4]

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[4]The chi-square statistic is inflated and distorted when an expected cell frequency is less than 5.

Frequency counts of the categorized mathematics courses are presnted by sex and race in Tables 13 and 14. Male and female students had very similar distributions of courses within each race, except for the Blacks and the American Indian/Alaskan Natives. For these two races, a higher percentage of female students were enrolled in college preparation mathematics courses than male students. The differences between male and female distributions were statistically significant for the Black students.

The fourth related variable investigated in the cross-sectional analysis was the student math stanine score. A notable and statistically significant difference was found between the distributions of categorized mathematics courses of students with different stanine scores (see Table 15). Over all races and grade levels, higher stanine scores were associated with higher percentages enrolled in college preparation mathematics courses. Presented in Table 16 are the distributions of stanine scores within each race of the selected population of students. No statistically significant differences were obtained between any of the races on their distributions of stanine scores. This indicates that within the particular population of students with high math stanine scores, the proportions of students with scores of 7, 8, and 9 were similar across all races. The joint distributions of stanine scores and categorized mathematics courses are given for each race in Tables 17 through 21. As can be seen from the tables, Asian/Pacific Islander students had higher percentages of 7th and 8th stanine students enrolled in college preparation mathematics courses than the other races. Nonenroll-

ment was also lower in percentages for these students than for 7th and 8th stanine students of other races. As in the other comparisons, Hispanic and White students exhibited similar distributions of categorized mathematics course even within stanine scores.

Enrollment in a second mathematics course was the final variable analyzed in the cross-sectional part of the study. It should be noted by the reader that up until this point, all results pertain to the most advanced mathematics course students were enrolled in. If a student took more than one mathematics course, only the most advanced course was included in the previously discussed analyses. Specific mathematics courses were given precedence over computer programming courses at the same level of prerequisites and difficulty. None of the students in the selected population were found to have taken more than two mathematics courses.

Displayed in Tables 22 and 23 are the frequency counts of student enrollment in a second mathematics course categorized by race and by race and level of mathematics course, respectively. Of the Black, American Indian/Alaskan Native, and Asian/Pacific Islander students, 12.9%, 17.1%, and 15.1%, respectively, were enrolled in a second mathematics course during the 1981-82 fall semester. Only 8.7% and 6.4% of the White and Hispanic students, respectively, were enrolled in a second mathematics course. Examination of the second mathematics course levels again revealed a striking similarity between the White and the Hispanic students. More than 50% of the White, Hispanic, and American Indian/

Alaskan Native students who enrolled in a second mathematics course, enrolled in a noncollege preparation course. Of the Asian/Pacific Islander and Black students, 72.7% and 100.0%, respectively, were enrolled in a second mathematics course at the college preparation level. Chi-square statistics were not used to compare the different races due to the small number of students within each race who enrolled in a second course.

Of the students who enrolled in a second mathematics course at the college preparation level, 85.3% were enrolled in a computer programming course. Sixty-one percent of the students who enrolled in a second mathematics course at the noncollege preparation level were also enrolled in a college preparation course. Many of these students took a core mathematics course in addition to a more advanced and specialized course.

Longitudinal Analysis of
1980-81 and 1981-82 Data

Frequency counts of the student math enrollment progressions from the 1980-81 fall semester to the 1981-82 fall semester are tabulated by race and grade level in Tables 24 through 28 in the Appendix. The percent of students with positive and negative enrollment progressions are depicted in Figures 3 and 4, respectively, for each race and grade level. As is clearly illustrated, similar trends were shared by all of the races. The percent of students with positive progressions in math enrollment decreased continuously after the ninth grade for the White and Hispanic students, after the tenth grade for the American Indian/Alaskan Native students, and after the eleventh

grade for the Asian/Pacific Islander students. The lowest percent with positive progressions was exhibited for all of these races in the twelfth grade where 48.1%, 41.7%, 75.0%, and 66.7%, respectively, progressed positively from the previous year. The percent of Black students with positive enrollment progressions dropped substantially after the ninth grade to a low of 40.0% in the eleventh grade, but rose to 100.0% in the twelfth grade.

Comparison of Figures 1 and 2 with Figures 3 and 4 confirm the strong similarity between the math enrollment patterns of the White and the Hispanic students. The consistency of enrollment patterns for each race is also substantiated by the similarities in the race by grade level plots in the figures. The race by grade level results in the cross-sectional analysis are thus not limited as characterizations of a single year, but do reflect enrollment patterns which have been consistent for two years.

Chi-square statistics again revealed no statistically significant differences between the enrollment progressions of White and Hispanic students within each grade level and over all grade levels. Statistically significant differences were found between the enrollment progressions of the White and the Asian/Pacific Islander students, and between the Black students and the American Indian/Alaskan Native and Asian/Pacific Islander students.

Enrollment progressions from the fall to the spring semester of 1980-81 are tabulated in Table 30 by race. For all races, a

very high percentage of students progressed positively from the fall to the spring semester. The smallest percentage occurred for the White students, with a positive enrollment progression of 88.8% of the students. No statistically significant differences were obtained between any of the races.

SUMMARY AND CONCLUSIONS

In reaction to the findings of previous research studies on Hispanic student participation in mathematics, a cross-sectional/ longitudinal study was conducted by the Mesa Public Schools Research and Evaluation Department during the 1981-82 school year. The motivating purpose of the study was to determine whether Hispanic students in the district, with high standardized test scores in mathematics, avoid taking more advanced mathematics courses in high school. The study was not limited in scope to only Hispanic students, but included students of all racial groups. Three semesters (1980-81 fall and spring semesters, 1981-82 fall semester) of data were used to study the posed problem. All junior and senior high non-White students with high standardized scores (stanine scores) in mathematics were included in the study along with a modified random sample of White students matched on grade level and sex. The selected population of students included in the study totaled 692; 347 non-White and 345 White.

No evidence was found within the district which supported the findings of the previous research. For all races, a reasonable to high percentage (low of 40.0%, high of 100.0%) of students with high standardized mathematics scores enrolled in college preparation mathematics courses throughout high school.

The mathematics enrollment patterns of the non-White students were not only in general similar to the White students, but equally important, no significant difference was observed between the distributions of stanine scores for any of the races. In particular, 60.0% of the Hispanic students with high standardized mathematics scores in grades 10-12 enrolled in college preparation mathematics courses. No significant differences were observed between the math enrollment patterns of the White and the Hispanic students within each grade level and over all grade levels.

Other results of the study did, however, indicate some potential problem areas. A downward trend was exhibited after the ninth grade in the percent of students enrolled in college preparation mathematics courses. The lowest percentages occurred in the twelfth grade for the White, Hispanic, and Asian/ Pacific Islander students where 48.1%, 41.7%, and 66.7% were enrolled in advanced mathematics courses. The percent of students who progressed positively in math enrollment similarly revealed a decreasing trend after the ninth grade for all of the races. The lowest percent with positive progressions occurred in the twelfth grade for the White, Hispanic, American Indian/Alaskan Native, and Asian/Pacific Islander students. Of these students, 48.1%, 41.7%, 75.0% and 66.7%, respectively, progressed positively from the previous year. The downward trends may be reflections of student decisions to pursue non-technical fields; student lack of interest in or discouragement with more advanced mathematics courses; lack of more varied mathematics courses such as statistics, probability, nonEuclidean geometry, logic, etc.; or any combination of these reasons.

The Asian/Pacific Islander students were found to surpass the other races in math participation in every grade level and over all grade levels. A significantly higher percentage (80.8%) enrolled in college preparation mathematics courses, a substantially lower percentage (4.1%) were not enrolled in a mathematics course, and a notably high percentage (93.4%) progressed positively in math enrollment. Even among the 7th and 8th stanine students, the Asian/Pacific Islanders revealed higher percentages enrolled in college preparation courses and lower percentages not enrolled in a mathematics course. These results indicate an under-participation of the other races in comparison to the Asian/Pacific Islanders within even the same stanine groups.

Of the students in the selected population, 9.4% or 65 were enrolled in a second mathematics course during the 1981-82 fall semester. Enrollment in a second mathematics course was more prevalent among the Black, American Indian/Alaskan Native, and Asian/Pacific Islander students (12.9%, 17.1%, and 15.1%, respectively) than among the White and Hispanic students (8.7% and 6.4%, respectively). The Asian/Pacific Islander and Black students were also more likely to be enrolled in a second mathematics course at the college preparation level than the other races. Sixty-one percent of the students who enrolled in a second mathematics course at the college preparation level were enrolled in a computer programming course. Many of the students who were enrolled in a noncollege preparation course took a core mathematics course in addition to a college preparation course. From these results, it can be inferred that a substantial

number (9.4%) of students with high standardized scores in math are interested and/or concerned about their mathematics training enough to enroll in two courses within a given semester; that the Black, American Indian/Alaskan Native, and Asian/Pacific Islander students are more interested and/or concerned than the White and Hispanic students; that there is student interest in more varied mathematics courses as shown by the popularity of computer programming; and that there may be unnecessary and wasteful overlapping of subject matter for students who simultaneously enroll in a core course and a more advanced course.

On the more positive side of results, a comparison within races between the level of mathematics courses taken by high math stanine male and female students revealed very similar distributions of categorized courses within every race except for the Blacks and the American Indian/Alaskan Natives. For these two races, a higher percentage of female students were enrolled in college preparation mathematics courses than male students. This indicates that in the Mesa Public Schools, female students with high standardized math scores are enrolling in as many or more mathematics courses as their male counterparts within each race. The level of mathematics courses taken are also similar between male and female students within each race.

The acquisition of basic mathematical and related skills such as adding, subtracting, multiplying, dividing, counting money change, b[illegible]king, taxes, etc. cannot be more strongly

emphasized and is well recognized as a prerequisite to functioning competently in today's world. It is a not well-recognized and/or stressed fact that in order to function competently in the near future, people will need substantially more sophisticated mathematical skills than are currently required. It is foreseeable that computer and calculator expertise will be added to the list of basic mathematical skills, along with a peripheral understanding of algebraic properties, geometric relationships, descriptive statistics, and mathematical logic. These skills and understandings are already required of persons in many professional fields and of students in college. Persons with technical capabilities have a definite advantage over those without technical capabilities. There is conceivably no field of work or study in which technical capabilities are not essential or would not enhance and facilitate. Employment opportunities are greater for those with technical capabilities and will become even more so in keeping with the rapid acceleration of technological developments.

It is recommended that school administrators (principals, counselors, etc.) and teachers encourage all students and particularly those with high math ability, to take as many mathematics courses as they can throughout junior high school, high school, and college. The mathematics curriculum should be expanded to include more varied courses such as statistics and probability which have frequent applications in daily life. An investigation should also be pursued regarding the lessening of math participation in the higher grade levels.

APPENDIX

Table 1

Representative Frequencies of Junior and Senior High Students with High Standardized Math Scores Categorized by Race

Jr. & Sr. High Students / Race	Total # of Students[5]	# with Math Stanine ≥ 7	% with Math Stanine ≥ 7
White	12,085	4,401	36.42
Black	199	31	15.58
Hispanic	1,159	202	17.43
Amer. Indian/ Alaskan Native	344	41	11.92
Asian/Pacific Islander	122	73	59.84
Jr. & Sr. High Total	13,909	4,748	34.14

≥ Greater than or equal to.

[5]Total number of students who had 1980-81 CAT math stanine scores.

Tables 2-7. Junior and Senior High Students with High Standardized Math Scores Categorized by Grade Level, Race, and 1981-82 Fall Semester Math Course

Table 2. Grade 7 Students

Race \ Math Course		None	7th Grade General Math	8th Grade General Math	General Math	Accel. Math Grade 7	Accel. Math Grade 8	Pre-Algebra	Race Total
White	#	0	43	15	5	7	3	3	76
	%	0	56.6	19.7	6.6	9.2	3.9	3.9	100.0
Black	#	3	3	0	1	0	0	0	7
	%	42.9	42.9	0	14.3	0	0	0	100.0
Hispanic	#	2	32	8	3	6	1	1	53
	%	3.8	60.4	15.1	5.7	11.3	1.9	1.9	100.0
Am. Ind./ Alask. Nat.	#	0	3	2	0	0	0	0	5
	%	0	60.0	40.0	0	0	0	0	100.0
Asian/ Pacific Isl.	#	0	5	2	0	3	0	2	12
	%	0	41.7	16.7	0	25.0	0	16.7	100.0
Grade Total	#	5	86	27	9	16	4	6	153
	%	3.3	56.2	17.6	5.9	10.5	2.6	3.9	100.0

Table 3. Grade 8 Students

Race \ Math Course		None	Basic Math	8th Grade General Math	9th Grade General Math	General Mathematics	Accel. Math 8th Grade	Pre-Algebra	Algebra I	Race Total
White	#	2	0	21	0	1	9	25	25	83
	%	2.4	0	25.3	0	1.2	10.8	30.1	30.1	100.0
Black	#	0	0	1	0	1	0	5	2	9
	%	0	0	11.1	0	11.1	0	55.6	22.2	100.0
Hispanic	#	2	0	18	1	1	3	19	5	49
	%	4.1	0	36.7	2.0	2.0	6.1	38.8	10.2	100.0
Am. Ind./ Alask. Nat.	#	0	0	5	0	0	0	2	4	11
	%	0	0	45.5	0	0	0	18.2	36.4	100.0
Asian/ Pacific Isl.	#	0	1	0	0	0	0	5	8	14
	%	0	7.1	0	0	0	0	35.7	57.1	100.0
Grade Total	#	4	1	45	1	3	12	56	44	166
	%	2.4	0.6	27.1	0.6	1.8	7.2	33.7	26.5	100.0

Table 4. Grade 9 Students

Race \ Math Course		None	8th Grade General Math	9th Grade General Math	Pre-Algebra	Algebra I	Geometry	Algebra II	Race Total
White	#	1	2	2	12	29	3	15	64
	%	1.6	3.1	3.1	18.8	45.3	4.7	23.4	100.0
Black	#	0	0	0	0	2	0	0	2
	%	0	0	0	0	100.0	0	0	100.0
Hispanic	#	1	0	3	9	19	1	7	40
	%	2.5	0	7.5	22.5	47.5	2.5	17.5	100.0
Am. Ind./ Alask. Nat.	#	0	0	1	3	2	0	0	6
	%	0	0	16.7	50.0	33.3	0	0	100.0
Asian/ Pacific Isl.	#	0	0	0	1	9	3	5	18
	%	0	0	0	5.6	50.0	16.7	27.8	100.0
Grade Total	#	2	2	6	25	61	7	27	130
	%	1.5	1.5	4.6	19.2	46.9	5.4	20.8	100.0

Table 5. Grade 10 Students

Race \ Math Course		None	Basic Math	Algebra 1	Geometry	Accel. Geometry	Algebra 2	Alg. 2/ Trig.	Race Total
White	#	8	0	15	23	3	0	0	49
	%	16.3	0	30.6	46.9	6.1	0	0	100.0
Black	#	2	0	0	3	0	0	0	5
	%	40.0	0	0	60.0	0	0	0	100.0
Hispanic	#	4	1	5	17	0	0	0	27
	%	14.8	3.7	18.5	63.0	0	0	0	100.0
Am. Ind./ Alask. Nat.	#	0	0	2	3	0	2	1	8
	%	0	0	25.0	37.5	0	25.0	12.5	100.0
Asian/ Pacific Isl.	#	0	0	1	6	1	0	0	8
	%	0	0	12.5	75.0	12.5	0	0	100.0
Grade Total	#	14	1	23	52	4	2	1	97
	%	14.4	1.0	23.7	53.6	4.1	2.1	1.0	100.0

Table 6. Grade 11 Students

Race \ Math Course		None	Alg. 2	Consumer Math	Math Review	Alg. 1	Geometry	Alg. 2	Alg. 2/ Trig.	Trig./ College Math	Adv. Plmt. Calculus/ Anal. Geom.	Race Total
White	#	17	0	1	1	1	6	6	9	5	0	46
	%	37.0	0	2.2	2.2	2.2	13.0	13.0	19.6	10.9	0	100.0
Black	#	3	0	0	0	0	0	1	0	1	0	5
	%	60.0	0	0	0	0	0	20.0	0	20.0	0	100.0
Hispanic	#	6	0	1	0	0	1	5	4	3	1	21
	%	28.6	0	4.8	0	0	4.8	23.8	19.0	14.3	4.8	100.0
Am. Ind./ Alask. Nat.	#	1	0	0	0	0	2	3	0	1	0	7
	%	14.3	0	0	0	0	28.6	42.9	0	14.3	0	100.0
Asian/ Pacific Isl.	#	0	1	0	0	0	1	1	1	5	3	12
	%	0	8.3	0	0	0	8.3	8.3	8.3	41.7	25.0	100.0
Grade Total	#	27	1	2	1	1	10	16	14	15	4	91
	%	29.7	1.1	2.2	1.1	1.1	11.0	17.6	15.4	16.5	4.4	100.0

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Table 7. Grade 12 Students

Race \ Math Course		None	Math Review	Computer Prog.	Geometry	Alg. 2	Alg. 2/ Trig.	Trig./ College Math	Adv. Placemt. Calculus Anal. Geom.	Race Total
White	#	13	1	1	2	1	1	4	4	27
	%	48.1	3.7	3.7	7.4	3.7	3.7	14.8	14.8	100.0
Black	#	0	0	0	0	0	1	1	1	3
	%	0	0	0	0	0	33.3	33.3	33.3	100.0
Hispanic	#	7	0	0	0	0	0	2	3	12
	%	58.3	0	0	0	0	0	16.7	25.0	100.0
Am. Ind./ Alask. Nat.	#	1	0	1	1	0	0	0	1	4
	%	25.0	0	25.0	25.0	0	0	0	25.0	100.0
Asian/ Pacific Isl.	#	3	0	0	0	0	0	1	5	9
	%	33.3	0	0	0	0	0	11.1	55.6	100.0
Grade Total	#	24	1	2	3	1	2	8	14	55
	%	43.6	1.8	3.6	5.5	1.8	3.6	14.5	25.5	100.0

Tables 8-12 Junior and Senior High Students with High Standardized Math Scores Categorized by Race, Grade Level, and 1981-82 Fall Semester Math Course Level

Table 8. White Students

Grade \ Math Course Level		None	Noncollege Prep.	College Prep.	Grade Total
7	#	0	63	13	76
	%	0	82.9	17.1	100.0
8	#	2	22	59	83
	%	2.4	26.5	71.1	100.0
9	#	1	16	47	64
	%	1.6	25.0	73.4	100.0
10	#	8	15	26	49
	%	16.3	30.6	53.1	100.0
11	#	17	3	26	46
	%	37.0	6.5	56.5	100.0
12	#	13	1	13	27
	%	48.1	3.7	48.1	100.0
Race Total	#	41	120	184	345
	%	11.9	34.8	53.3	100.0

Table 9. Black Students

Grade \ Math Course Level		None	Noncollege Prep.	College Prep.	Grade Total
7	#	3	4	0	7
	%	42.9	57.1	0	100.0
8	#	0	2	7	9
	%	0	22.2	77.8	100.0
9	#	0	0	2	2
	%	0	0	100.0	100.0
10	#	2	0	3	5
	%	40.0	0	60.0	100.0
11	#	3	0	2	5
	%	60.0	0	40.0	100.0
12	#	0	0	3	3
	%	0	0	100.0	100.0
Race Total	#	8	6	17	31
	%	25.8	19.4	54.8	100.0

Table 10. Hispanic Students

Grade \ Math Course Level		None	Noncollege Prep.	College Prep.	Grade Total
7	#	2	43	8	53
	%	3.8	81.1	15.1	100.0
8	#	2	20	27	49
	%	4.1	40.8	55.1	100.0
9	#	1	12	27	40
	%	2.5	30.0	67.5	100.0
10	#	4	6	17	27
	%	14.8	22.2	63.0	100.0
11	#	6	1	14	21
	%	28.6	4.8	66.7	100.0
12	#	7	0	5	12
	%	58.3	0	41.7	100.0
Race Total	#	22	82	98	202
	%	10.9	40.6	48.5	100.0

Table 11. American Indian/
Alaskan Native Students

Grade \ Math Course Level		None	Noncollege Prep.	College Prep.	Grade Total
7	#	0	5	0	5
	%	0	100.0	0	100.0
8	#	0	5	6	11
	%	0	45.5	54.5	100.0
9	#	0	4	2	6
	%	0	66.7	33.3	100.0
10	#	0	2	6	8
	%	0	25.0	75.0	100.0
11	#	1	0	6	7
	%	14.3	0	85.7	100.0
12	#	1	0	3	4
	%	25.0	0	75.0	100.0
Race Total	#	2	16	23	41
	%	4.9	39.0	56.1	100.0

Table 12. Asian/Pacific Islander Students

Grade \ Math Course Level		None	Noncollege Prep.	College Prep.	Grade Total
7	#	0	7	5	12
	%	0	58.3	41.7	100.0
8	#	0	1	13	14
	%	0	7.1	92.9	100.0
9	#	0	1	17	18
	%	0	5.6	94.4	100.0
10	#	0	1	7	8
	%	0	12.5	87.5	100.0
11	#	0	1	11	12
	%	0	8.3	91.7	100.0
12	#	3	0	6	9
	%	33.3	0	66.7	100.0
Race Total	#	3	11	59	73
	%	4.1	15.1	80.8	100.0

Tables 13-14

Junior and Senior High Students with High Standardized Math Scores Categorized by Sex, Race, and 1981-82 Fall Semester Math Course Level

Table 13

Male Students

Race \ Math Course Level		None	Noncollege Prep.	College Prep.	Race Total
White	#	17	58	91	166
	%	10.2	34.9	54.8	100.0
Black	#	6	1	4	11
	%	54.5	9.1	36.4	100.0
Hispanic	#	11	44	52	107
	%	10.3	41.1	48.6	100.0
American Indian/	#	0	8	7	15
Alaskan Native	%	0	53.5	46.7	100.0
Asian/Pacific	#	1	6	29	36
Islanders	%	2.8	16.7	80.6	100.0
Male	#	35	117	183	335
Total	%	10.4	34.9	54.6	100.0

Table 14

Female Students

Race \ Math Course Level		None	Noncollege Prep.	College Prep.	Race Total
White	#	24	62	93	179
	%	13.4	34.6	52.0	100.0
Black	#	2	5	13	20
	%	10.0	25.0	65.0	100.0
Hispanic	#	11	38	46	95
	%	11.6	40.0	48.4	100.0
American Indian/	#	2	8	16	26
Alaskan Native	%	7.7	30.8	61.5	100.0
Asian/Pacific	#	2	5	30	37
Islanders	%	5.4	13.5	81.1	100.0
Female	#	41	118	198	357
Total	%	11.5	33.1	55.1	100.0

Table 15

Junior and Senior High Students with
High Standardized Math Scores Categorized by
1980-81 CAT Math Stanine and 1981-82 Fall Semester
Math Course Level

Math Course Level / Stanine		None	Noncollege Prep.	College Prep.	Stanine Total
7	#	50	165	193	408
	%	12.3	40.4	47.3	100.0
8	#	15	49	101	165
	%	9.1	29.7	61.2	100.0
9	#	11	21	87	119
	%	9.2	17.6	73.1	100.0
Total	#	76	235	381	692
	%	11.0	34.0	55.1	100.0

Table 16

Junior and Senior High Students with
High Standardized Math Scores Categorized by
Race and 1980-81 CAT Math Stanine

Stanine / Race		7	8	9	Race Total
White	#	194	85	66	345
	%	56.2	24.6	19.1	100.0
Black	#	22	6	3	31
	%	71.0	19.4	9.7	100.0
Hispanic	#	131	45	26	202
	%	64.9	22.3	12.9	100.0
American Indian/ Alaskan Native	#	26	9	6	41
	%	63.4	22.0	14.6	100.0
Asian/Pacific Islander	#	35	20	18	73
	%	47.9	27.4	24.7	100.0
Total	#	408	165	119	692
	%	59.0	23.8	17.2	100.0

Tables 17-21

Junior and Senior High Students with
High Standardized Math Scores Categorized by
Race, 1980-81 CAT Math Stanine, and 1981-82 Fall Semester
Math Course Level

Table 17

White Students

Stanine \ Math Course Level		None	Noncollege Prep.	College Prep.	Stanine Total
7	#	27	78	89	194
	%	13.9	40.2	45.9	100.0
8	#	7	32	46	85
	%	8.2	37.6	54.1	100.0
9	#	7	10	49	66
	%	10.6	15.2	74.2	100.0
Race Total	#	41	120	184	345
	%	11.9	34.8	53.3	100.0

Table 18

Black Students

Stanine \ Math Course Level		None	Noncollege Prep.	College Prep.	Stanine Total
7	#	6	5	11	22
	%	27.3	22.7	50.0	100.0
8	#	1	0	5	6
	%	16.7	0	83.3	100.0
9	#	1	1	1	3
	%	33.3	33.3	33.3	100.0
Race Total	#	8	6	17	31
	%	25.8	19.4	54.8	100.0

Table 19

Hispanic Students

Stanine \ Math Course Level		None	Noncollege Prep.	College Prep.	Stanine Total
7	#	16	63	52	131
	%	12.2	48.1	39.7	100.0
8	#	5	13	27	45
	%	11.1	28.9	60.0	100.0
9	#	1	6	19	26
	%	3.8	23.1	73.1	100.0
Race Total	#	22	82	98	202
	%	10.9	40.6	48.5	100.0

Table 20

American Indian/
Alaskan Native Students

Stanine \ Math Course Level		None	Noncollege Prep.	College Prep.	Stanine Total
7	#	1	11	14	26
	%	3.8	42.3	53.8	100.0
8	#	1	3	5	9
	%	11.1	33.3	55.6	100.0
9	#	0	2	4	6
	%	0	33.3	66.7	100.0
Race Total	#	2	16	23	41
	%	4.9	39.0	56.1	100.0

Table 21

Asian/Pacific Islander Students

Stanine \ Math Course Level		None	Noncollege Prep.	College Prep.	Stanine Total
7	#	0	8	27	35
	%	0	22.9	77.1	100.0
8	#	1	1	18	20
	%	5.0	5.0	90.0	100.0
9	#	2	2	14	18
	%	11.1	11.1	77.8	100.0
Race Total	#	3	11	59	73
	%	4.1	15.1	80.8	100.0

Table 22

Junior and Senior High Students with
High Standardized Math Scores Enrolled in a Second Math Course
During the 1981-82 Fall Semester: Categorized by Race

Race		Enrollment in a Second Math Course	Race Total
White	#	30	345
	%	8.7	100.0
Black	#	4	31
	%	12.9	100.0
Hispanic	#	13	202
	%	6.4	100.0
American Indian/ Alaskan Native	#	7	41
	%	17.1	100.0
Asian/ Pacific Islander	#	11	73
	%	15.1	100.0
Total	#	65	692
	%	9.4	100.0

Table 23

Junior and Senior High Students with High Standardized Math Scores
Enrolled in a Second Math Course During the 1981-82 Fall Semester:
Categorized by Race and Level of Second Math Course

Race \ Math Course Level		Noncollege Prep	College Prep	Race Total
White	#	17	13	30
	%	56.7	43.3	100.0
Black	#	0	4	4
	%	0	100.0	100.0
Hispanic	#	7	6	13
	%	53.8	46.2	100.0
American Indian/ Alaskan Native	#	4	3	7
	%	57.1	42.9	100.0
Asian/ Pacific Islander	#	3	8	11
	%	27.3	72.7	100.0
Total	#	31	34	65
	%	47.7	52.3	100.0

Tables 24-28. Comparison Between 1980-81 and 1981-82 Fall Semester Math Courses of Junior and Senior High Students with High Standardized Scores in Math Categorized by Race and Grade Level

Table 24. White Students

Grade* / Comparison		No Enroll Both Years (-)	Enroll '80-81 No Enroll '81-82 (-)	Less Adv. Enroll in '81-82 (-)	Negative Enrollment Progression (-)	No Enroll '80-81 Enroll '81-82 (+)	Comparable Enroll in '81-82 (+)	More Adv. Enroll in '81-82 (+)	Positive Enrollment Progression (+)	Grade Total
8	#	0	2	2	4	6	9	64	79	83
	%	0	2.4	2.4	4.8	7.2	10.8	77.1	95.2	100.0
9	#	0	1	1	2	3	4	55	62	64
	%	0	1.6	1.6	3.1	4.7	6.3	85.9	96.9	100.0
10	#	1	7	1	9	2	6	32	40	49
	%	2.0	14.3	2.0	18.4	4.1	12.2	65.3	81.6	100.0
11	#	2	15	1	18	3	5	20	28	46
	%	4.3	32.6	2.2	39.1	6.5	10.9	43.5	60.9	100.0
12	#	6	7	1	14	1	2	10	13	27
	%	22.2	25.9	3.7	51.9	3.7	7.4	37.0	48.1	100.0
Total	#	9	32	6	47	15	26	181	222	269
	%	3.3	11.9	2.2	17.5	5.6	9.7	67.3	82.5	100.0

*Excludes seventh graders.

Table 25. Black Students

Comparison / Grade*		No Enroll Both Years (-)	Enroll '80-81 No Enroll '81-82 (-)	Less Adv. Enroll in '81-82 (-)	Negative Enrollment Progression (-)	No Enroll '80-81 Enroll '81-82 (+)	Comparable Enroll in '81-82 (+)	More Adv. Enroll in '81-82 (+)	Positive Enrollment Progression (+)	Grade Total
8	#	0	0	1	1	0	1	7	8	9
	%	0	0	11.1	11.1	0	11.1	77.8	88.9	100.0
9	#	0	0	0	0	0	1	1	2	2
	%	0	0	0	0	0	50.0	50.0	100.0	100.0
10	#	0	2	0	2	0	0	3	3	5
	%	0	40.0	0	40.0	0	0	60.0	60.0	100.0
11	#	0	3	0	3	0	1	1	2	5
	%	0	60.0	0	60.0	0	20.0	20.0	40.0	100.0
12	#	0	0	0	0	0	0	3	3	3
	%	0	0	0	0	0	0	100.0	100.0	100.0
Total	#	0	5	1	6	0	3	15	18	24
	%	0	20.8	4.2	25.0	0	12.5	62.5	75.0	100.0

*Excludes seventh graders.

Table 26. Hispanic Students

Comparison / Grade*		No Enroll Both Years (-)	Enroll '80-81 No Enroll '81-82 (-)	Less Adv. Enroll in '81-82 (-)	Negative Enrollment Progression (-)	No Enroll '80-81 Enroll '81-82 (+)	Comparable Enroll in '81-82 (+)	More Adv. Enroll in '81-82 (+)	Positive Enrollment Progression (+)	Grade Total
8	#	0	2	0	2	1	8	38	47	49
	%	0	4.1	0	4.1	2.0	16.3	77.6	95.9	100.0
9	#	0	1	1	2	1	2	35	38	40
	%	0	2.5	2.5	5.0	2.5	5.0	87.5	95.0	100.0
10	#	0	4	1	5	1	4	17	22	27
	%	0	14.8	3.7	18.5	3.7	14.8	63.0	81.5	100.0
11	#	1	5	1	7	0	6	8	14	21
	%	4.8	23.8	4.8	33.3	0	28.6	38.1	66.7	100.0
12	#	3	4	0	7	0	0	5	5	12
	%	25.0	33.3	0	58.3	0	0	41.7	41.7	100.0
Total	#	4	16	3	23	3	20	103	126	149
	%	2.7	10.7	2.0	15.4	2.0	13.4	69.1	84.6	100.0

Excludes seventh graders.

Table 27. American Indian/Alaskan Native Students

Grade* \ Comparison		No Enroll Both Years (-)	Enroll '80-81 No Enroll '81-82 (-)	Less Adv. Enroll in '81-82 (-)	Negative Enrollment Progression (-)	No Enroll '80-81 Enroll '81-82 (+)	Comparable Enroll in '81-82 (+)	More Adv. Enroll in '81-82 (+)	Positive Enrollment Progression (+)	Grade Total
8	#	0	0	0	0	0	0	11	11	11
	%	0	0	0	0	0	0	100.0	100.0	100.0
9	#	0	0	0	0	0	0	6	6	6
	%	0	0	0	0	0	0	100.0	100.0	100.0
10	#	0	0	0	0	0	2	6	8	8
	%	0	0	0	0	0	25.0	75.0	100.0	100.0
11	#	0	1	0	1	1	3	2	6	7
	%	0	14.3	0	14.3	14.3	42.9	28.6	85.7	100.0
12	#	0	1	0	1	0	2	1	3	4
	%	0	25.0	0	25.0	0	50.0	25.0	75.0	100.0
Total	#	0	2	0	2	1	7	26	34	36
	%	0	5.6	0	5.6	2.8	19.4	72.2	94.4	100.0

*Excludes seventh graders.

Table 28. Asian/Pacific Islander Students

Comparison / Grade*		No Enroll Both Years (-)	Enroll '80-81 No Enroll '81-82 (-)	Less Adv. Enroll in '81-82)	Negative Enrollment Progression (-)	No Enroll '80-81 Enroll '81-82 (+)	Comparable Enroll in '81-82 (+)	More Adv. Enroll in '81-82 (+)	Positive Enrollment Progression (+)	Grade Total
8	#	0	0	1	1	0	0	13	13	14
	%	0	0	7.1	7.1	0	0	92.9	92.9	100.0
9	#	0	0	0	0	0	0	18	18	18
	%	0	0	0	0	0	0	100.0	100.0	100.0
10	#	0	0	0	0	0	3	5	8	8
	%	0	0	0	0	0	37.5	62.5	100.0	100.0
11	#	0	0	0	0	0	1	11	12	12
	%	0	0	0	0	0	8.3	91.7	100.0	100.0
12	#	0	3	0	3	0	1	5	6	9
	%	0	33.3	0	33.3	0	11.1	55.6	66.7	100.0
Total	#	0	3	1	4	0	5	52	57	61
	%	0	4.9	1.6	6.6	0	8.2	85.2	93.4	100.0

*Excludes seventh graders.

Table 29. Comparison Between 1980-81 and 1981-82 Fall Semester Math Courses of Junior and Senior High Students with High Standardized Scores in Math Categorized by Race

Race \ Comparison		No Enroll Both Years (-)	Enroll '80-81 No Enroll '81-82 (-)	Less Adv. Enroll in '81-82 (-)	Negative Enrollment Progression (-)	No Enroll '80-81 Enroll '81-82 (+)	Comparable Enroll in '81-82 (+)	More Adv. Enroll in '81-82 (+)	Positive Enrollment Progression (+)	Race Total*
White	#	9	32	6	47	15	26	181	222	269
	%	3.3	11.9	2.2	17.5	5.6	9.7	67.3	82.5	100.0
Black	#	0	5	1	6	0	3	15	18	24
	%	0	20.8	4.2	25.0	0	12.5	62.5	75.0	100.0
Hispanic	#	4	16	3	23	3	20	103	126	149
	%	2.7	10.7	2.0	15.4	2.0	13.4	69.1	84.6	100.0
Am. Indian/ Alaskan Native	#	0	2	0	2	1	7	26	34	36
	%	0	5.6	0	5.6	2.8	19.4	72.2	94.4	100.0
Asian/ Pacific Islander	#	0	3	1	4	0	5	52	57	61
	%	0	4.9	1.6	6.6	0	8.2	85.2	93.4	100.0
Total	#	13	58	11	82	19	61	377	457	539
	%	2.4	10.8	2.0	15.2	3.5	11.3	69.9	84.8	100.0

*Excludes seventh graders since they were sixth graders in 1980-81 and could not enroll in specific mathematics courses then.

Table 30. Comparison Between 1980-81 Fall and Spring Semester Math Courses of Junior and Senior High Students with High Standardized Scores in Math Categorized by Race

Race \ Comparison		No Enroll Both Years (-)	Enroll '80-81 No Enroll '81-82 (-)	Less Adv. Enroll in '81-82 (-)	Negative Enrollment Progression (-)	No Enroll '80-81 Enroll '81-82 (+)	Comparable Enroll in '81-82 (+)	More Adv. Enroll in '81-82 (+)	Positive Enrollment Progression (+)	Race Total*
White	#	16	6	8	30	8	225	6	239	269
	%	5.9	2.2	3.0	11.2	3.0	83.6	2.2	88.8	100.0
Black	#	0	0	1	1	0	23	0	23	24
	%	0	0	4.2	4.2	0	95.8	0	95.8	100.0
Hispanic	#	4	1	4	9	3	135	2	140	149
	%	2.7	0.7	2.7	6.0	2.0	90.6	1.3	94.0	100.0
Am. Indian/ Alaskan Native	#	0	0	0	0	1	34	1	36	36
	%	0	0	0	0	2.8	94.4	2.8	100.0	100.0
Asian/ Pacific Islander	#	0	0	2	2	0	57	2	59	61
	%	0	0	3.3	3.3	0	93.4	3.3	96.7	100.0
Total	#	20	7	15	42	12	474	11	497	539
	%	3.7	1.3	2.8	7.8	2.2	87.9	2.0	92.2	100.0

*Excludes seventh graders since they were sixth graders in 1980-81 and could not enroll in specific mathematics courses.

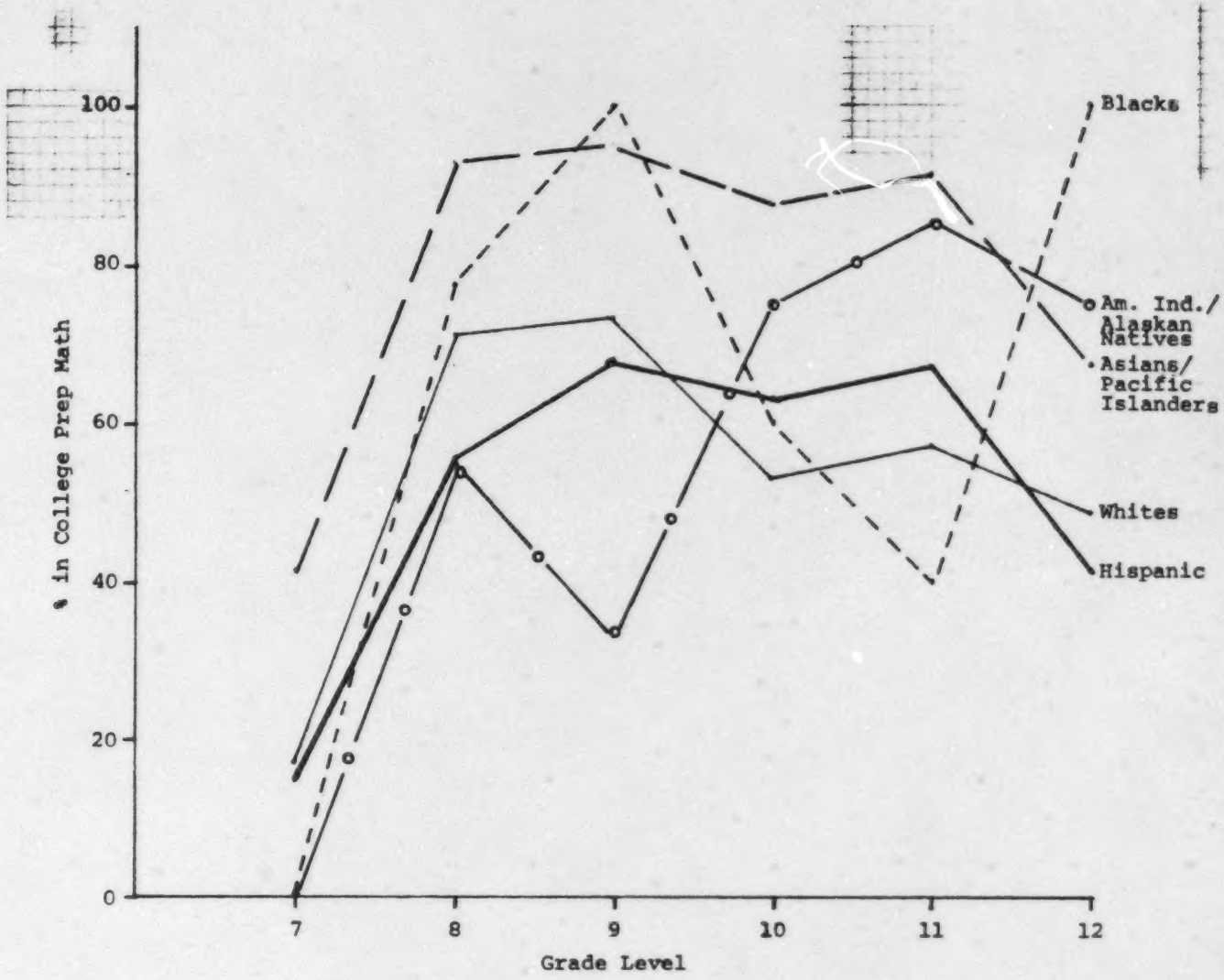
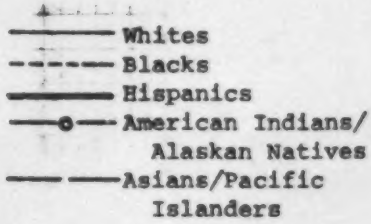


Figure 1. Percent of Students in College Prep Math by Race and Grade Level



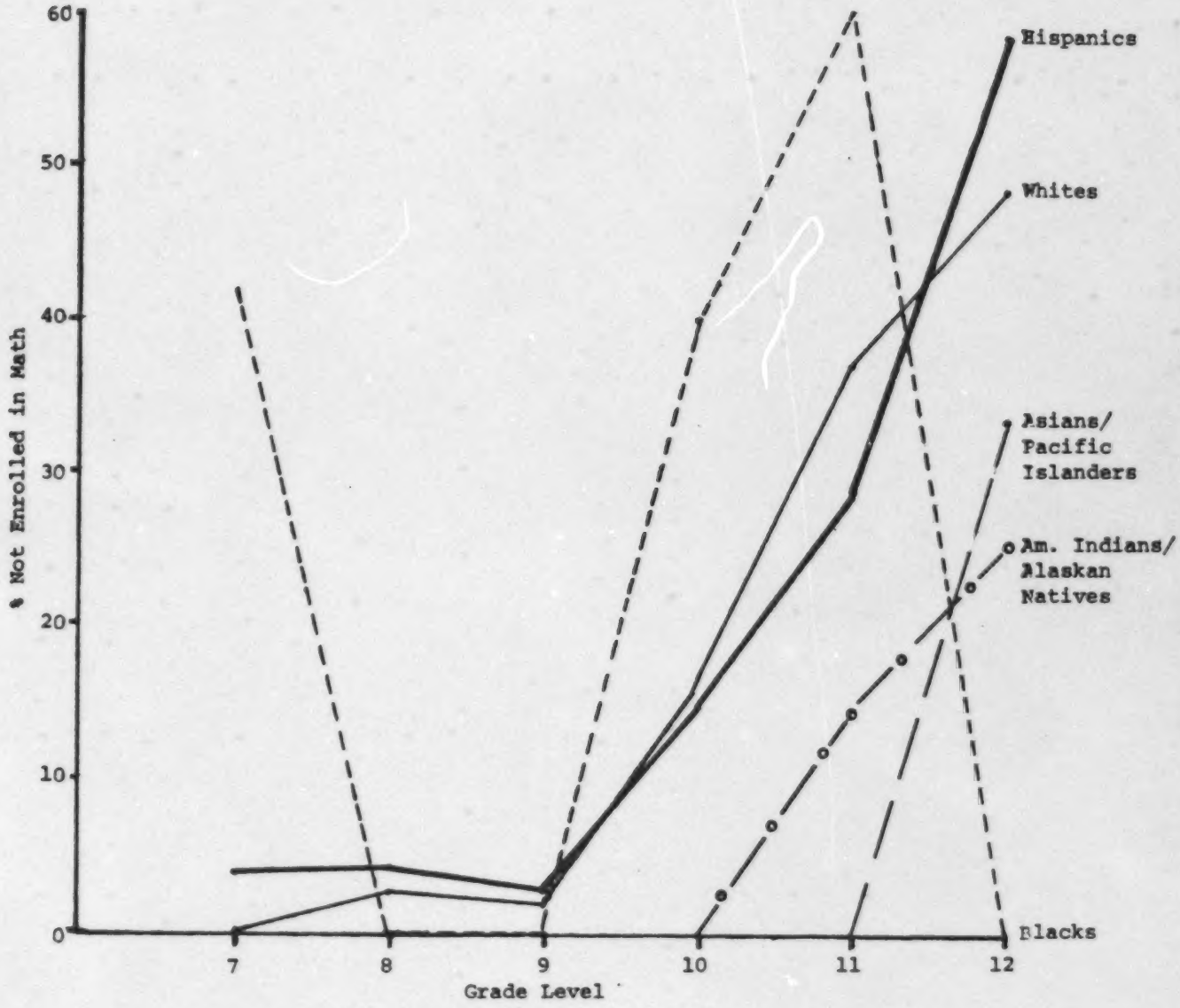


Figure 2. Percent of Students Not Enrolled in Math by Race and Grade Level

Whites
Blacks
Hispanics
American Indians/
Alaskan Natives
Asians/Pacific Islanders

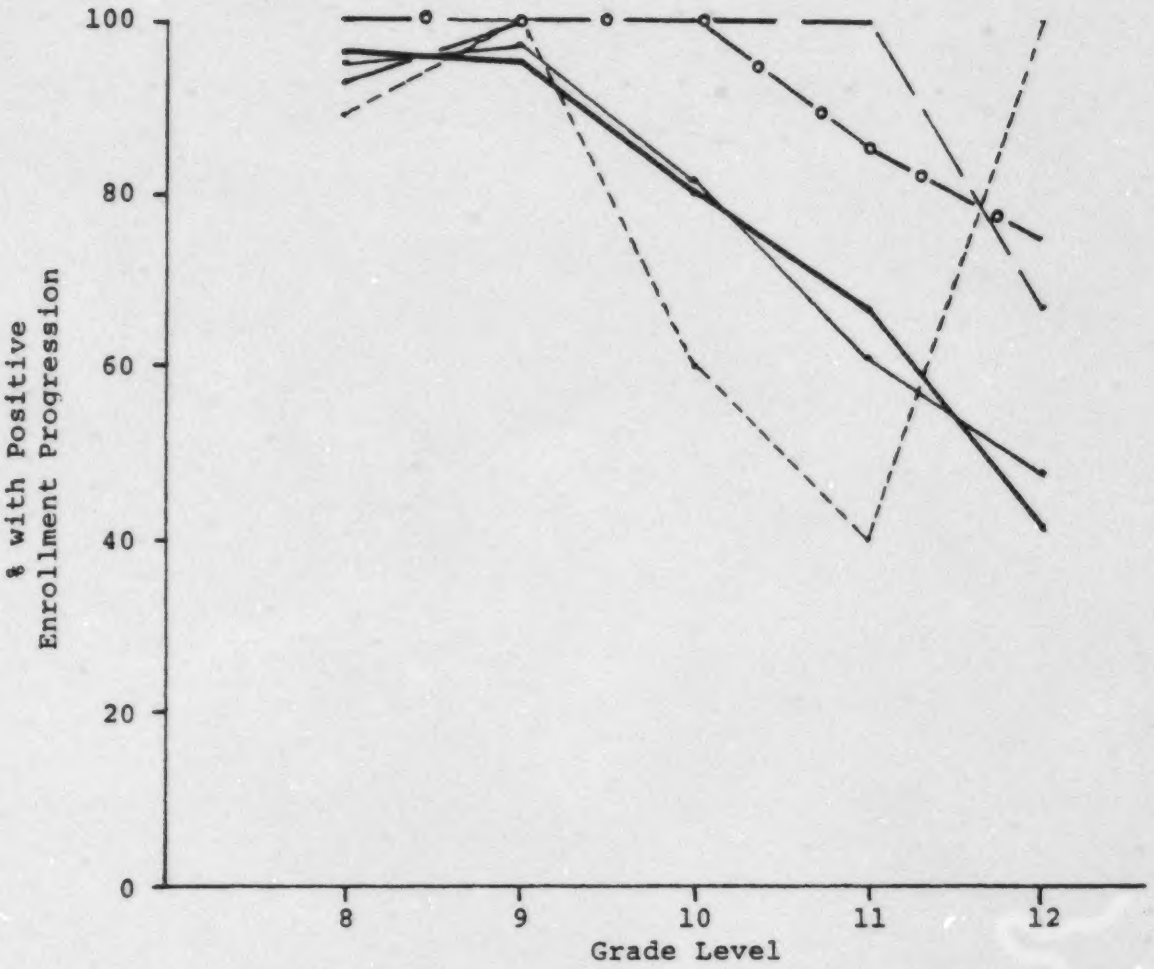


Figure 3. Percent of Students with Positive Progression in Math Enrollment from 1980-81 to 1981-82

——— Whites
- - - - - Blacks
——— Hispanics
—o— American Indians/ Alaskan Natives
— — Asians/Pacific Islanders

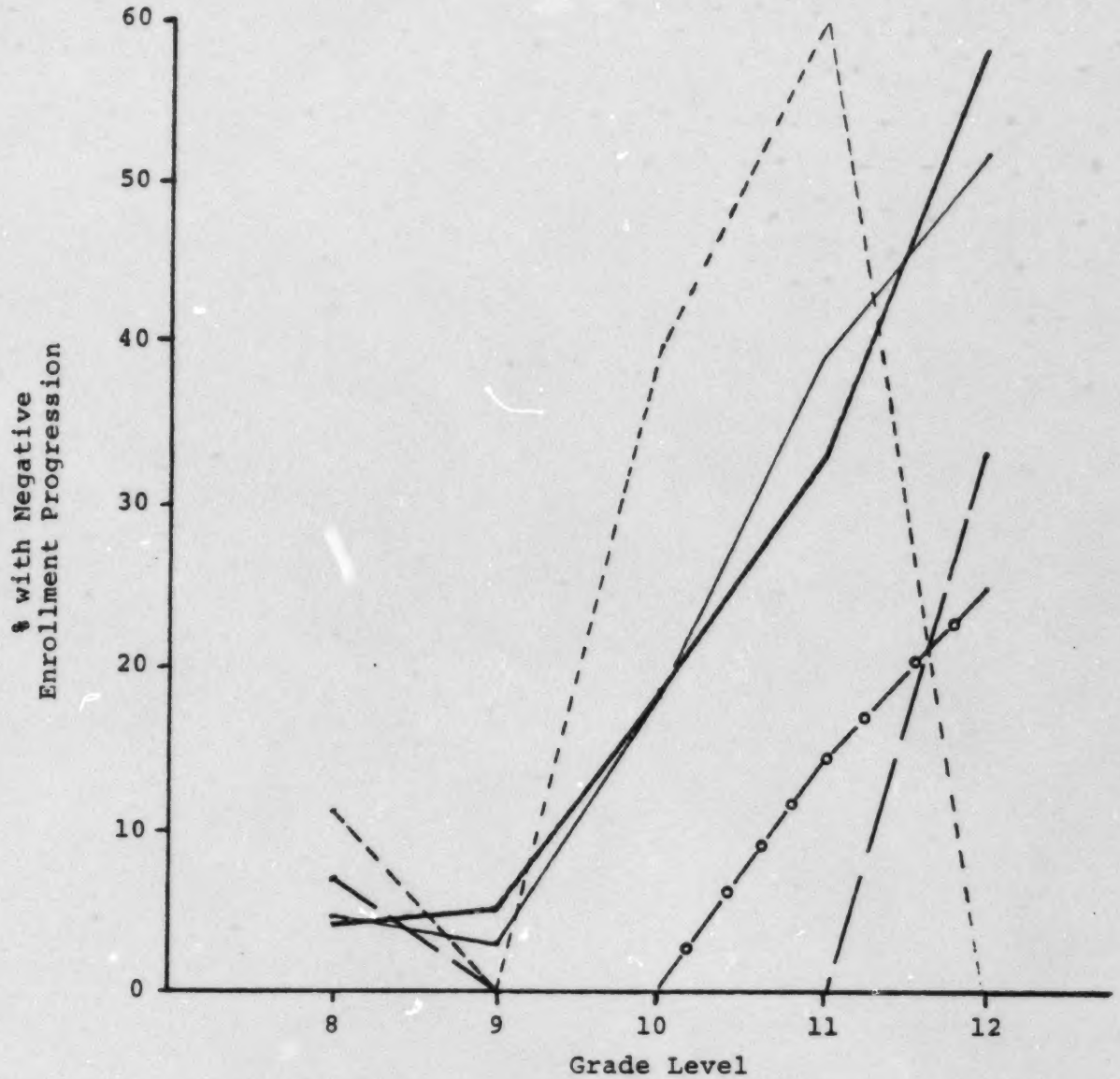


Figure 4. Percent of Students with Negative Progression in Math Enrollment from 1980-81 to 1981-82

——— Whites
----- Blacks
▬▬▬ Hispanics
—o— American Indians/
Alaskan Natives
— — Asians/Pacific Islanders